Amendments to the Claims:

Please amend claims 2 and 4 as follows. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1. (Previously Canceled).

Claim 2. (Currently Amended) An apparatus for adaptively detecting a receiving signal for power line communication, comprising:

a main control unit (MCU) interface unit for adjusting a timing of data transmission;

a register unit for storing control data, a threshold value, an offset value, and an error rate received from said MCU interface unit, and for outputting the stored data and values;

a control logic unit for controlling a selection of a threshold value, based on the control data stored in said register unit;

a reference data selecting unit for selectively outputting, as threshold values, the threshold value and offset value respectively stored in said register unit or an external threshold value and an external offset value, under control of said control logic unit; and

a data processing unit for determining, based on threshold values to be selectively outputted by said reference data selecting unit, whether or not ~~the~~ serial data received via a power line is ~~effective~~ valid data, and for outputting the receiving data;

wherein the data processing unit comprises:

a data shift unit for shifting the serial data received via the power line, thereby outputting the data in parallel;

a comparing unit for comparing the output signal from said data shift unit with the offset value selectively outputted from said reference data selecting unit;

a first compressing unit for compressing an output signal from said comparing unit;

a second compressing unit for re-compressing an output signal from said first compressing unit;

a summing unit for summing output signals from said second compressing unit; and

a determining unit for comparing an output signal value from said summing unit with the

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threshold value selectively outputted from said reference data selecting unit, thereby determining whether or not the output signal value from the summing unit is ~~effective~~ valid data, and for transmitting the determined value to the MCU.

Claim 3. (Previously Canceled).

Claim 4 (Currently Amended)   A method for adaptively detecting a receiving signal for power line communication, comprising the steps of:

(a) receiving control data, a threshold value, an offset value, and an error rate from a main control unit (MCU), storing the received data and values, and then waiting for receiving serial data via a power line;

(b) if serial data is received at said step (a), then determining, based on the threshold value and offset value, whether or not the serial receiving data is ~~effective~~ valid data;

(c) if it is determined at said step (b) that the serial receiving data is ~~effective~~ valid data, then outputting a determination value of ~~effective~~ valid data;

(d) if it is determined at said step (b) that the serial receiving data is ~~ineffective~~ invalid data, then incrementing ~~the number~~ a number of errors; and

(e) if the number of errors incremented at said step (d) is not less than a predetermined allowance value, re-setting the threshold value and offset value as a new threshold value and a new offset value;

wherein said step (b) comprises the steps of:

(b-1) converting the serial receiving data into parallel data, and then comparing the parallel data with said offset value;

(b-2) compressing signals obtained after the comparison at said step (b-1), and summing the compressed signals; and

(b-3) comparing the signal obtained after the summing at said step (b-2) with the threshold value, thereby determining whether or not the serial receiving data is ~~effective~~ valid data.

Remarks/Arguments:

This amendment adds no new claims, and is provided to amend the specification, abstract, and claims 2 and 4. No new matter has been added. Upon entry of this amendment, claims 2 and 4 will be pending.

Claim Objections

The Examiner has objected to claims 2 and 4 for the following informalities. In claim 2, line 12, the Examiner has suggested that the phrase "whether or not the serial data" be replaced by the phrase "whether or not ~~the~~ serial data". In claim 2, lines 13 and 25, the Examiner has suggested that the phrase "~~effective~~ data" should be replaced by the phrase "valid data". Accordingly, the Applicants have amended claim 2 as suggested by the Examiner.

In claim 4, lines 7-9 and 21-22, the Examiner has suggested that the term "~~effective~~ data" should be replaced by the phrase "valid data", and that in line 10 that the phrase "~~ineffective~~ data" should be replaced by the phrase "invalid data". In claim 4, line 11, the Examiner has suggested that the phrase "incrementing ~~the number~~ of errors" should be replaced by the phrase "incrementing a number of errors". Accordingly, the Applicants have amended claim 4 as suggested by the Examiner.

Specification Objections

Based upon the above objections to claims 2 and 4 and the suggested corrections to each, the Examiner has further suggested that the specification and abstract be amended to reflect similar changes. Accordingly, the Applicants have amended the specification and abstract to replace the phrase "~~effective~~ data" by the phrase "valid data", and to replace the phrase "~~ineffective~~ data" by the phrase "invalid data" as suggested by the Examiner.
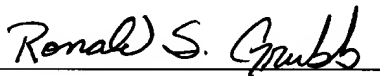
Conclusion

The amendments made in this response are fully responsive to the requirements set forth in the In re Quayle office action by the Examiner. Therefore, the Applicants respectfully request that the application be passed to issue.

As noted above, the Applicants would further like to remind the Examiner of the telephone conference on November, 10, 2004, in which is was determined that a typographical error was found in a U.S. Patent Number cited by the Examiner in the Office Action of November 3, 2004. Specifically, the cited reference no. US 5,575,758, should have been US 5,574,748. Applicants point this out to ensure that the correct cited reference number is reflected in any resulting patent.

If the Examiner has any questions, please contact the undersigned at 202-659-9076.

Respectfully submitted,

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